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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,781	07/14/2003	Naga Bhushan	030168U1	7814
23696 7590 01/04/2007 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER VU, MICHAEL T	
			ART UNIT	PAPER NUMBER
			2617	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		01/04/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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us-docketing@qualcomm.com
kaskanla@qualcomm.com
t_ssadik@qualcomm.com

Office Action Summary	Application No.		Applicant(s)	
	10/619,781		BHUSHAN ET AL.	
	Examiner		Art Unit	
	Michael Vu		2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 5-7, 12-14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 8-11, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markwalter (US 6,577,630) in view of Ito (US 5,826,172).

Regarding **claims 1 and 8**, Markwalter teaches a method for transmission of packetized data in a wireless communication system having a designated packet error rate (Col. 1, line 35-52), the method comprising: determining a first number of installments for transmission of a first packet of data (Col. 21 through Col. 30, line 67);

But Markwalter does not clearly teach on the power boosting transmissions of a second number of installments of the first subpacket of data, wherein the second number is less than the first number, wherein the second number is selected to satisfy the designated packet error rate; and terminating transmission of the first subpacket of data after the second number of installments.

However, Ito teaches the mobile communications system for repeatedly transmitting signals such as transmitting or retransmitting in which has been set in

control signal, in which includes the decoder terminates the processing of that paging signal depends on the configuration corresponding to comparison of the transmission (See Figure 2, paragraphs Col. 4, line 4-34, Col. 5, line 20 through Col. 7, line 65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Markwalter, such that the power boosting transmissions of a second number of installments of the first subpacket of data, wherein the second number is less than the first number, wherein the second number is selected to satisfy the designated packet error rate; and terminating transmission of the first subpacket of data after the second number of installments, to optimize the routing packets to destination address and to minimize the latency of the routing over the network such as the problem packets and/or frames errors, congestions, interferences occurred.

Regarding **claims 2 and 9**, Markwalter/Ito teach the method as in claim 1, wherein a power boosting gain factor is applied to each of the second number of installments (Col. 1, line 5-10) of Ito.

Regarding **claims 3 and 10**, Markwalter/Ito teach the method as in claim 2, wherein the power boosting gain factor is nominally set to (N/M) , wherein N is the first number of installments, and M is the second number of installments (Figure 2, frame 1, frame 2 divided by sub-frames) of Ito.

Regarding **claims 4 and 11**, Markwalter/Ito the method as in claim 1, wherein terminating transmission of the first subpacket of data comprises: initiating a second

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subpacket of data after the second number of installments (Figures 2, 5, Col. 5, line 20 through Col. 7, line 65) of Ito.

Regarding **claims 15-16, and 18**, Markwalter teaches a base station apparatus (Col. 40, line 30-37) comprising: a packet processing unit adapted to receive data for transmission and generate packets ((Col. 1, line 35-52), each of the packets transmitted in a number of installments (Col. 1, line 35-52);

But Markwalter does not clearly teach on a power boost unit adapted to apply a power boost factor to a portion of the subpackets, an acknowledgement message processing unit adapted to terminate transmission of installments for a subpacket on receipt of an acknowledgement message; and a transmitter for transmitting power boosted subpackets, wherein the packet processing unit terminates processing of the subpacket on receipt of a negative acknowledgement message after the portion of the subpackets is transmitted.

However, Ito teaches the mobile communications system for repeatedly transmitting signals such as transmitting or retransmitting in which has been set in control signal, in which includes the decoder terminates the processing of that paging signal depends on the configuration corresponding to comparison of the transmission (See Figure 2, paragraphs Col. 4, line 4-34, Col. 5, line 20 through Col. 7, line 65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Markwalter, such that a power boost unit adapted to apply a power boost factor to a portion of the subpackets, an acknowledgement message processing unit adapted to terminate transmission of

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installments for a subpacket on receipt of an acknowledgement message; and a transmitter for transmitting power boosted subpackets, wherein the packet processing unit terminates processing of the subpacket on receipt of a negative acknowledgement message after the portion of the subpackets is transmitted, to optimize the routing packets to destination and to minimize the latency of the routing over the network such as the packets or frames errors, congestions, interferences problem occurred.

Regarding **claim 17**, Markwalter/Ito teach the method as in claim 16, wherein the first negative acknowledgement has a first bit pattern, and the second negative acknowledgement is a different bit pattern orthogonal to the first bit pattern (Col. 25, line 4 through Col. 30, line 67) of Markwalter.

Allowable Subject Matter

3. Claims 5-7, and 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For **claims 5 and 12**, the prior art of this record does not disclose or teach wherein the first number of installments for the first subpacket of data corresponds to a first time period, wherein terminating transmission of the first subpacket of data comprises: waiting for expiration of the first time period; and initiating transmission of a second subpacket of data after expiration of the first time period.

Claims 6-7, and 13-14 depend on claims 5 and 12.

Conclusion


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vu whose telephone number is (571) 272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Field can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael Vu
Examiner



TEMICA BEAMER
PRIMARY EXAMINER